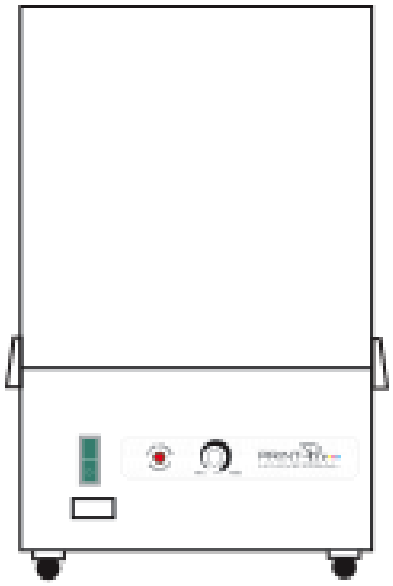
PRINT Pro UNIVERSAL



PRINTPro Universal

FUME EXTRACTION UNITS

OPERATIONAL INSTRUCTIONS

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Symbols used

Danger Refers to an immediately impending danger. If the danger is not avoided, it could result in death or severe (crippling) injury. Please consult the manual where this symbol is displayed.

Warning Refers to a possibly dangerous situation. If it is not avoided, it could result in death or severe injury. Please consult the manual where this symbol is displayed.

Caution Refers to a possibly harmful situation. If it is not avoided, damage could be caused to the product or to something in its environment.

Important Refers to handling tips and other particularly useful information. This does not signify a dangerous or harmful situation.

Electrical safety

The PrintPro Universal range of extraction units are designed to meet the safety requirements of the Low Voltage Directive 2006/95/EC (previously numbered 73/23/EEC) and UL 61010-1.

Warning During works with the pump/motor housing open, mains voltage components are accessible. Make sure that rules and regulations for work on live components are always observed.

Important To reduce the risk of fire, electric shock or injury:

1. Always isolate the system from the mains power supply before removing the pump/motor panel
2. Use only as described in the manual
3. Connect to a properly grounded outlet

Dangers to eyes, breathing and skin

Once used, the filters within the extraction units will contain a mixture of particulates, some of which may be sub micron size. When the used filters are moved it may agitate some of this particulate which could get into the breathing zone and eyes of the operative. Additionally, depending on the substances involved, the particulate may be an irritant to the skin.

Caution: When changing used filters always wear mask, safety glasses and gloves.

Please note the media in the gas filter fitted in this unit is capable of adsorbing a wide range of organic compounds. However, it is the responsibility of the user to ensure it is suitable for the particular application it is being used on.

Warning and Information Labels

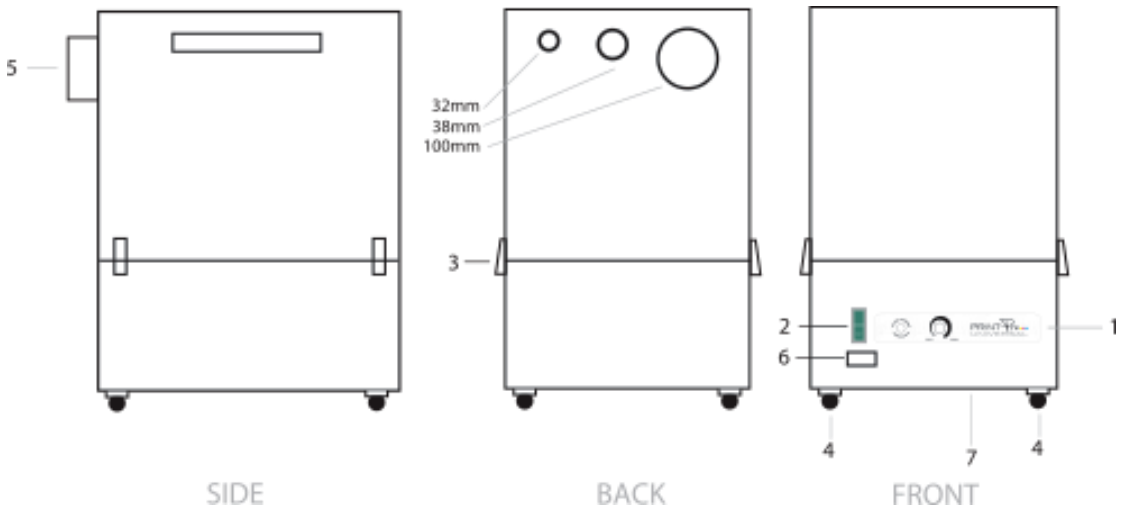
Label/Symbol	Position
	Base, closest to the front, middle
	Back of unit close to the top and central.
	Next to protex clip on base.
	Left hand side of unit, in the bottom right corner.

Extractor Overview

The PrintPro Universal units are designed to provide extraction and filtration for the fume generated by various printing applications. The units are of robust design and feature ease of use with minimal maintenance. The main components are shown in (fig. 1).

Fig. 1

1. Unit/Filter Condition Display
2. On/Off Switch
3. Filter Compartment Latch
4. Castors (2 lockable)
5. Extraction Hose Inlet Connections
6. Power Cable Connection
7. Exhaust and cooling air discharge



Extractor Installation Procedure

Caution

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Read all instructions in this manual before using this extractor.

1. Move the unit to the location where it is going to be installed and remove the unit from its packaging. The unit should be installed in a well ventilated room.

Caution
Due to the weight involved the extractor unit should only be lifted using suitable lifting equipment and with regard to appropriate safety precautions. (See Appendix for product weight details).

2. Ensure that a 0.5m space is available around any louvered areas of the unit to ensure adequate air flow. Lock the two braked castors, if fitted.

Caution
Do not block or cover any louvers or cooling holes on the unit as this severely restricts air flow and may cause damage to the unit.

Caution
Under no circumstances should the exhaust outlet/s be covered as this will restrict the airflow and cause overheating.

3. Check filters are located in their correct position and carefully replace lid/close door.

4. Connect the extraction ducting between the extractor inlet and the printer using hose adaptors and jubilee clips as required. Ducting runs should be kept as short as possible.

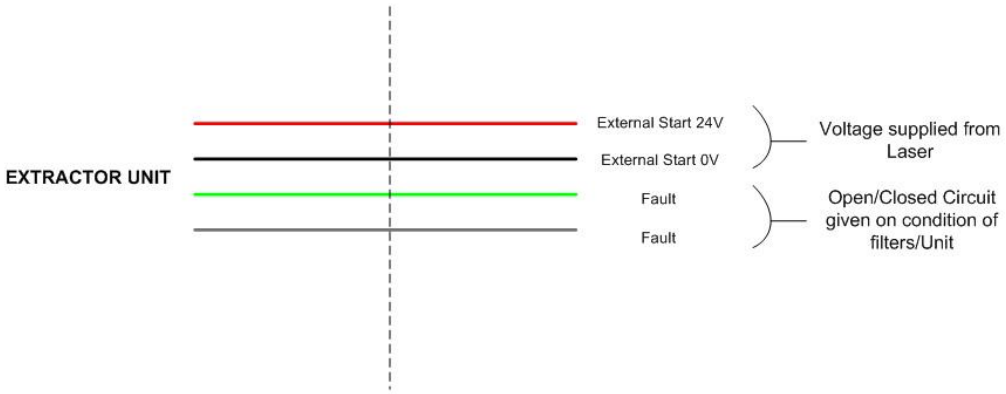
Optional Feature Considerations

5. If fitted, the following features need to be considered when installing the unit:

Filter blocked / System failure signal.
With this option the extraction unit will have been fitted with a pressure transducer to monitor the condition of the filters and to indicate the extractor is running. In addition to controlling the LED's on the front of the unit, this signal is available via the green and white cores of the control cable that exits the cabinet next to the power cable. The signal is a "volt free" contact, i.e. a closed circuit will exist between the green and white wires when the filter condition is good and the unit is running. This will change to an open circuit on filter blockage or system failure. This feature should only be used on control voltage circuits. The signal can be connected to the laser or alternatively to operate a beacon, siren or warning device. Open circuit condition of this circuit will not directly stop the extractor motor (see fig 2).

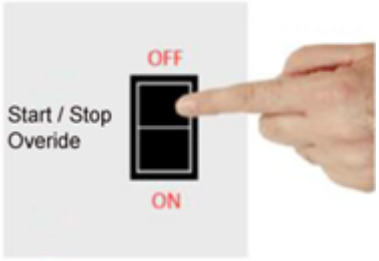
Remote stop / start.
If this facility is installed it enables the extractor unit to be turned on and off by a signal from the laser. The red and black cores of the control cable need to be connected to a 24vdc supply, which when applied will start the unit and when switched off will stop the unit. However the mains power switch must be in the "on" position for the signal to be effective (see fig 2).

Fig 2



If fitted, remote operation can be overridden by using the override switch, which is mounted inside the unit (see fig. 3).

Fig 3



Electrical supply connection

6. Check the integrity of the electrical power cable.

Connect the power cable to an isolated electrical supply. The mains socket outlet should be installed near the equipment and be easily accessible. The cable run to the machine should be arranged so as not to create a trip hazard.

Caution:
Check that the mains input at the isolated supply is the same as the voltage Supply detail on the Serial Number label **(115 or 230v 50/60Hz)** before plugging the extractor unit in.

General Safety Requirements

The mains socket outlet should be installed near the equipment and be easily accessible.

Caution

Do not block or cover the cooling vents on the unit, as this severely restricts airflow and may cause damage to the unit. (This may be located on the base of the unit).

Caution

This unit is over 18Kgs in weight and should only be lifted with suitable lifting equipment.

Caution

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Read all instructions in this manual before using this extractor.

Warning **Mains voltage. Dangerous voltages exist in this equipment. Ensure all covers are fitted before operating this equipment.**

The unit is now ready for use.

Manual operation

Units are turned on by depressing the power side of the switch on the front of the extractor and turned off by depressing the off (O) side of the switch. (See fig 4).

Fig 4

Note: In order to help ensure long term reliability of the fan unit, it is recommended that a 90 second delay period (minimum) is observed between stopping and restarting the extractor to prevent possible damage to electronic components within the fan.

Setting The Air Flow

This unit comes with a speed control feature which allows the user to set their desired air flow. This is performed by using the potentiometer situated on the front of the unit (see fig 5). Flow (with clean filters) can be adjusted from 200 – 380m3/h.

Fig 5

Gas Filter Change LED (VOC monitoring)

The print pro unit comes fitted with VOC (Volatile Organic Compound) monitoring, this is done by means of a VOC sensor fitted in the exhausted air compartment. If their presence exceeds a preset level the Alarm LED on the front panel will illuminate (see fig 5), this indicates that the gas filter is saturated and the filter needs replacing. The Maintenance section describes the filter change procedure.

Optional Feature

As an option, units can be fitted with a filter condition indication system which is both VOC sensor and pressure transducer driven. In this case the front panel will be as shown in (fig 6).

Fig 6 - Gas filter full indication - VOC monitor and filter blocked indication.

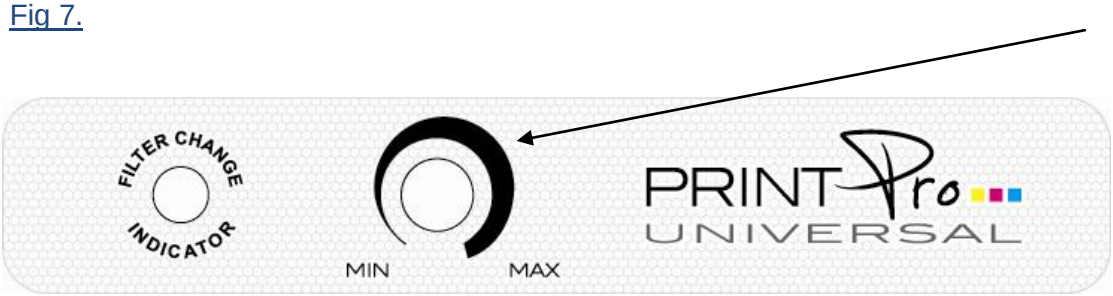
The four LED's on the front panel (see table below) indicate the following conditions

LED'S	SHOWING	INDICATES
	Green Only	Unit is running - Filters are usable
	Green & Amber	Pre or Combined Filter 75% blocked
	Green, Amber & Red	Pre or Combined Filter Blocked and in need of replacing
	Green, Amber & Red flashing	Fault with extractor. This condition may occur for a few seconds on start up
	Red Alarm Light	Only used with optional extra Gas Filter Change LED

Note – When solvent ink filter option is used, filter status indication will only show green (extraction fan operation/ vacuum ok) or green, amber and red flashing (fan failure/ system vacuum too low).

Note – When particulate filter option is used, filter blocked will only be indicated if flow is set above ¼ of the flow range. With blocked filter indication) illuminated, the required minimum 200m3/h flow rate will only be achieved with flow set in the 'max' position (see fig 7)**.**

Fig 7.



Maintenance UK

It is a legal requirement, under regulation 9 of the COSHH regulations, that all local exhaust ventilation systems are visually inspected on a weekly basis, where possible and undergo a thorough inspection and test on an annual basis. COSHH requires the annual inspection and testing to be carried out by a competent person with specific documentation of the results held in a log book. Bofa can provide this service, our inspectors are BOHS P601 qualified, and copies of the required initial information and forms are included in the Log book supplied with the extractor.
Additionally the log book contains a form detailing the weekly inspection requirements and log for recording the results.

Maintenance General

User maintenance is limited to cleaning the unit and replacing the filters with new. Only BOFA International trained maintenance technicians are authorised to carry out component testing and replacement. Unauthorised work or the use of unauthorised replacement filters may result in a potentially dangerous situation and/or damage to the extractor unit, and will invalidate the manufacturer's warranty.

Fuses

The following table gives details of the internal fuses in the Advantage range of units:

Item Protected	Fuse Rating Amp	FLC Amp	Fuse Type	Fuse Size mm
12v DC PSU	1	<1	T1AH250V	20x5

Over current protection for the extractor unit is provided by the mains two pole switch as seen in (Fig 4)

Cleaning

Powder coated paint finished units can be cleaned with a damp cloth and non-aggressive detergent Following the manufacturer's instructions.

The cooling inlet and outlet should be cleaned once a year to prevent build up of dust and overheating of the unit.

Gas Filter / Combined filter replacement

The filter needs changing annually, or when the filter alarm signal and LED, or Gas filter full LED (depending on option fitted) does not go off after changing the pre filter.

The carbon media within this filter is hygroscopic and will absorb moisture from the atmosphere. This is why the filters should be changed every twelve months regardless.

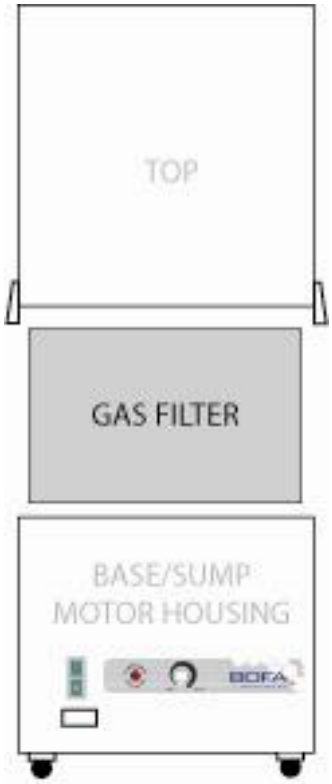
Caution: When changing used filters always wear mask, safety glasses and gloves.

Pre filter replacement

The filter needs changing annually, or when the green amber and red LED's on the unit are illuminated. Isolate the electrical supply to the extractor

Caution: When changing used filters always wear mask, safety glasses and gloves.

Fig 8



UV PRINTERS

Isolate the electrical supply to the unit. Undo the protex clips on either side of the unit and lift the top section off. Withdraw filters and remove any dust in the base. Remove the pre filter from inside the combined filter and if still serviceable fit into a new combined filter. Locate the new filters onto the base. Replace the top section and fasten the protex clips. Reconnect the power supply. (See fig 8)

INK SOLVENT PRINTERS

Isolate the electrical supply to the unit. Undo the protex clips on either side of the unit and lift the top section off. Withdraw filter and remove any dust in the base. Remove the Gas filter. Locate the new filters onto the base. Replace the top section and fasten the protex clips. Reconnect the power supply.

Consumable Spares

Item	Part Number	Description
PrintPro Universal	A1030167 A1030228 A1030157 A1030158 A1030169	Heavy Duty Pre Filter Combined Filter Combined Filter with space(optional) Heavy Duty Gas Filter Gas Filter with Space for Pre Filter

Maintenance Protocol

Filters to be changed in accordance with instructions. Log the date of filters replaced in the table below:

Unit Serial Number			
Pre Filter		**Combined or Gas Filter**	
Date	**Name**	**Date**	**Name**

Filter Disposal

Pre and combined filters are manufactured from non-toxic materials.
Filters are not re-usable, cleaning used filters is not recommended.
Disposal of the used filters depends on the material deposited on them.
See the following table:

Deposit	EWC listing*	Comment
Non Hazardous	15 02 03	Can be disposed of as non hazardous waste.
Hazardous	15 02 02 M	The type of Hazard needs to be identified and the associated risks defined. The thresholds for these risks can then be compared with the amount of material in the filters to see if they fall into the hazardous category. If so, the filters will need to be disposed of inline with the local/national regulations.

* European Waste Catalogue

TROUBLE SHOOTING

In the event of a problem with your PrintPro Universal extractor please contact your local representative.

OR

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Creekmoor Industrial Estate
Poole, Dorset BH17 7DX, UK

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Fax: +44 (0)1202 699446

Email: technical@bofa.co.uk

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Bofa Americas Inc.
303 S. Madison Street
Staunton, Illinois 62088
USA

Tel: (618)-635-4465

Fax: (866) 707-2632 (BOFA)

Email: info@bofaamericas.com

Website: www.bofaamericas.com

System Specifications

Unit: PrintPro Universal

Nominal Max Air Flow:	380 m^3h
Size:	height 670mm x depth 430mm x width 370mm
Weight:	45Kgs
Exhauster	Centrifugal Fan
Power Consumption:	1.1Kw
Electrical supply:	115-230V +/- 10% (50/60Hz)
Full Load Current:	12.5A
Noise level:	68 dB (At typical operating speed)

Filter Status Indication:

Amber Light Operation @ 220m^3h
Red Light Operation @ 200m^3h

N.B - The above figures are only applicable with flow control set in the 'max' position

Filter Options:

(Solvent Ink)

Heavy Duty Gas Filter: 25Kgs Special Impregnated Carbon

N.B – When solvent ink filter option is used, filter status indication will only show green (extraction fan operation/ vacuum ok) or green, amber and red flashing (fan failure/ system vacuum too low). See section 3.2.

Environmental Operating Range

Temperature	+5°C to +40°C
Humidity	Max 80 % RH up to 31°C To Max 50% RH at 40°C

(UV Particulate applications)

Pre Filter	Surface area	7.0 m^2
	Efficiency F8	85% @ 0.8µ
Hepa Filter	Surface area	3.5m^2
	Efficiency H13	99.997% @ 0.3µ
Gas Filter	Activated Carbon	12.0Kg (20 Litres)